

Listing of claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

1-17. (canceled).

18. (withdrawn) A method of detecting *Streptococcus* nucleic acids in a biological sample obtained from an animal involving assaying for one or more nucleic acid sequences encoding *Streptococcus* polypeptides in a sample comprising:

(a) contacting the sample with ~~one or more of the above described nucleic acid probes~~ the isolated polynucleotide of claim 55, under conditions such that hybridization occurs, and

(b) detecting hybridization of said ~~one or more probes~~ polynucleotide to the one or more *Streptococcus* nucleic acid sequences present in the biological sample.

19. (withdrawn) A method of detecting *Streptococcus* nucleic acids in a biological sample obtained from an animal, comprising:

(a) amplifying ~~one or more Streptococcus nucleic acid sequences~~ the isolated polynucleotide of claim 78 in said sample using polymerase chain reaction, and

(b) detecting said amplified ~~Streptococcus nucleic acid~~ polynucleotide.

20-21 (canceled).

22. (new) An isolated polynucleotide consisting of a nucleic acid sequence encoding an amino acid sequence identical to, except for up to five amino acid alterations per 100 amino acids, the amino acid sequence of SEQ ID NO:56.

23. (new) An isolated polynucleotide consisting of the full complement of the nucleic acid sequence of claim 22.

24. (new) The isolated polynucleotide of claim 22 which encodes the amino acid sequence of SEQ ID NO:56.

25. (new) The isolated polynucleotide of claim 22 which is fused to a heterologous polynucleotide sequence.

26. (new) The isolated polynucleotide of claim 25, wherein said heterologous polynucleotide sequence encodes a polypeptide.

27. (new) A method of making a recombinant vector comprising inserting the isolated polynucleotide of claim 22 into a vector.

28. (new) A recombinant vector comprising the isolated polynucleotide of claim 22.

29. (new) The recombinant vector of claim 28, wherein said polynucleotide is operably associated with a heterologous regulatory sequence that controls gene expression.

30. (new) A recombinant host cell comprising the isolated polynucleotide of claim 22.

31. (new) The recombinant host cell of claim 30, wherein said polynucleotide is operably associated with a heterologous regulatory sequence that controls gene expression.

32. (new) A method for producing a polypeptide, comprising:

(a) culturing a recombinant host cell comprising the isolated polynucleotide of claim 22 under conditions suitable to produce a polypeptide encoded by said polynucleotide; and

(b) recovering the polypeptide.

33. (new) An isolated polynucleotide consisting of a nucleic acid sequence encoding an epitope-bearing portion of the amino acid sequence of SEQ ID NO:56.

34. (new) An isolated polynucleotide consisting of a nucleic acid sequence encoding a portion of the amino acid sequence of SEQ ID NO:56 which specifically binds an antibody that specifically binds to a polypeptide consisting of the amino acid sequence of

SEQ ID NO:56, wherein said portion comprises an amino acid sequence selected from the group consisting of:

- A-Z*
- (a) Arg-10 to Arg-17;
 - (b) Lys-29 to Ser-39;
 - (c) Ser-140 to Ala-153;
 - (d) Arg-158 to Tyr-169;
 - (e) Asp-175 to Ala-183;
 - (f) Gly-216 to Asn-236;
 - (g) Ala-261 to Leu-270;
 - (h) Arg-282 to Phe-291;
 - (i) Thr-297 to Ala-305;
 - (j) Pro-342 to Gln-362;
 - (k) Phe-455 to Asp-463;
 - (l) His-497 to Thr-511;
 - (m) Ala-521 to Gly-529;
 - (n) Ile-537 to Val-546;
 - (o) Ile-556 to Ala-568;
 - (p) Pro-581 to Ser-595;
 - (q) Glu-670 to Ala-685;
 - (r) Ser-696 to Ala-705; and
 - (s) Leu-782 to Ser-791.

35. (new) The isolated polynucleotide of claim 34 which is fused to a heterologous polynucleotide sequence.

36. (new) The isolated polynucleotide of claim 35, wherein said heterologous polynucleotide sequence encodes a polypeptide.

37. (new) A method for making a recombinant vector comprising inserting the isolated polynucleotide of claim 34 into a vector.

38. (new) A recombinant vector comprising the isolated polynucleotide of claim 34.

39. (new) The recombinant vector of claim 38, wherein said polynucleotide is operably associated with a heterologous regulatory sequence that controls gene expression.

40. (new) A recombinant host cell comprising the isolated polynucleotide of claim 34.

41. (new) The recombinant host cell of claim 40, wherein said polynucleotide is operably associated with a heterologous regulatory sequence that controls gene expression.

42. (new) A method for producing a polypeptide, comprising:

(a) culturing a recombinant cell comprising the isolated polynucleotide of claim 34 under conditions suitable to produce a polypeptide encoded by said polynucleotide; and

(b) recovering the polypeptide.

43. (new) An isolated polynucleotide consisting of a nucleic acid sequence encoding a portion of SEQ ID NO:56, wherein said portion is at least 9 contiguous amino acid residues of SEQ ID NO:56.

44. (new) The isolated polynucleotide of claim 43, wherein said portion is at least 30 contiguous amino acid residues of SEQ ID NO:56.

45. (new) The isolated polynucleotide of claim 44, wherein said portion is at least 50 contiguous amino acid residues of SEQ ID NO:56.

46. (new) The isolated polynucleotide of claim 45, wherein said portion is at least 100 contiguous amino acid residues of SEQ ID NO:56.

47. (new) The isolated polynucleotide of claim 43, wherein said polynucleotide is fused to a heterologous polynucleotide sequence.

48. (new) The isolated polynucleotide of claim 47, wherein said heterologous polynucleotide sequence encodes a polypeptide.

49. (new) A method for making a recombinant vector comprising inserting the isolated polynucleotide of claim 43 into a vector.

50. (new) A recombinant vector comprising the isolated polynucleotide of claim 43.

51. (new) The recombinant vector of claim 50, wherein said polynucleotide is operably associated with a heterologous regulatory sequence that controls gene expression.

52. (new) A recombinant host cell comprising the isolated polynucleotide of claim 43.

53. (new) The recombinant host cell of claim 52, wherein said polynucleotide is operably associated with a heterologous regulatory sequence that controls gene expression.

54. (new) A method for producing a polypeptide, comprising:

(a) culturing a recombinant cell comprising the isolated polynucleotide of claim 43 under conditions suitable to produce a polypeptide encoded by said polynucleotide; and

(b) recovering the polypeptide.

55. (new) An isolated polynucleotide consisting of a first nucleic acid sequence which hybridizes at 42°C in 5X SSC and 50% formamide, to a second nucleic acid sequence selected from the group consisting of:

(a) SEQ ID NO:55; and

(b) the full complement of (a);

wherein said first nucleic acid sequence hybridizes to at least about 15 nucleotides of said second nucleic acid sequence.

56. (new) The isolated polynucleotide of claim 55, wherein said nucleic acid sequence is (a).

57. (new) The isolated polynucleotide of claim 55, wherein said nucleic acid sequence is (b).

58. (new) The isolated polynucleotide of claim 55(b), wherein said polynucleotide is fused to a heterologous polynucleotide sequence.

59. (new) The isolated polynucleotide of claim 58, wherein said heterologous polynucleotide sequence encodes a polypeptide.

60. (new) A method for making a recombinant vector comprising inserting the isolated polynucleotide of claim 55(b) into a vector.

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61. (new) A recombinant vector comprising the isolated polynucleotide of claim 55(b).

62. (new) The recombinant vector of claim 61, wherein said polynucleotide is operably associated with a heterologous regulatory sequence that controls gene expression.

63. (new) A recombinant host cell comprising the isolated polynucleotide of claim 55(b).

64. (new) The recombinant host cell of claim 63, wherein said polynucleotide is operably associated with a heterologous regulatory sequence that controls gene expression.

65. (new) A method for producing a polypeptide, comprising:

(a) culturing a recombinant cell comprising the isolated polynucleotide of claim 55(b) under conditions suitable to produce a polypeptide encoded by said polynucleotide; and

(b) recovering the polypeptide.

66. (new) An isolated polynucleotide consisting of a nucleic acid molecule selected from the group consisting of:

(a) SEQ ID NO:55; and

(b) the full complement of (a).

67. (new) The isolated polynucleotide of claim 66 which is fused to a heterologous polynucleotide sequence.

68. (new) A method for making a recombinant vector comprising inserting the isolated polynucleotide of claim 66 into a vector.

69. (new) A recombinant vector comprising the isolated polynucleotide of claim 66.

70. (new) A recombinant host cell comprising the isolated polynucleotide of claim 66.

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71. (new) An isolated polynucleotide consisting of a nucleic acid sequence identical to, except for up to five nucleotide alterations per 100, selected from the group consisting of:

(a) SEQ ID NO:55; and

(b) the full complement of (a).

72. (new) The isolated polynucleotide of claim 71, wherein said nucleic acid sequence is (a).

73. (new) The isolated polynucleotide of claim 71, wherein said nucleic acid sequence is (b).

74. (new) The isolated polynucleotide of claim 71, wherein said polynucleotide is fused to a heterologous polynucleotide sequence.

75. (new) A method for making a recombinant vector comprising inserting the isolated polynucleotide of claim 71 into a vector.

76. (new) A recombinant vector comprising the isolated polynucleotide of claim 71.

77. (new) A recombinant host cell comprising the isolated polynucleotide of claim 71.

78. (New) An isolated polynucleotide consisting of at least 50 contiguous nucleotides of a nucleic acid sequence selected from the group consisting of:

- (a) SEQ ID NO:55; and
- (b) the full complement of (a).

79. (New) The isolated polynucleotide of claim 78, wherein said nucleic acid sequence is (a).

80. (New) The isolated polynucleotide of claim 78, wherein said nucleic acid sequence is (b).

81. (New) The isolated polynucleotide of claim 78, wherein said polynucleotide comprises a heterologous polynucleotide sequence.

82. (New) A method for making a recombinant vector comprising inserting the isolated polynucleotide of claim 78 into a vector.

83. (New) A recombinant vector comprising the isolated polynucleotide of claim 78.

84. (New) A recombinant host cell comprising the isolated polynucleotide of claim 78.